

Observations on the nest of the Singing Bushlark.—The air-strip at Mitchell Plateau, North Kimberley W.A. is the haunt for quite a number of individuals of the Singing Bushlark (*Mirafra javanica*); 30-40 birds are usually to be seen at a time during maintenance work. In the wet season, October to March, the strip is mown at monthly intervals. A tractor with a P.T.O. driven slasher is used.

When mowing on March 23, 1979, I found three nests; on March 24 another five, and on March 26 four more; a total of twelve nests. Ten of these had three eggs or newly hatched chicks, one nest had two eggs and another had one egg. In one area there were four nests, a check showed these to be around 100 m apart.

The only indication of a nest would be when a bird flew from beneath a clump of grass. All the nests were under the same species of speargrass, a small round, domed nest with the side entrance at ground level. The eight nests found on the first two days all contained eggs; two of these nests I had mowed over and saw the parent fly off the eggs. On the next run I covered these with grass which the parent readily accepted. After a day off and starting again on March 26, on my first round I found a nest which the mower had been over two days previously; as the mower cuts 5 cm from ground level, the top half of the nest was missing and three newly hatched chicks were completely exposed to the elements. No effort had been made to reconstruct the nest. This nest I also covered with grass and again the parents tolerated the interference. The nests were checked on March 27. Each had chicks; except the nest which had one egg, this now contained three eggs. In the nest with two eggs two nestlings were present.

Rainfall during the past wet season was well below normal, until a tropical low formed off the coast which subsequently developed into cyclone Hazel; this low brought 340 mm of rain at the airstrip from March 7 to 10. Perhaps this stimulated the nesting to take place simultaneously among so many individual pairs.

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Some Mistletoes and Hosts from the Murchison and Wooramel Rivers, W.A.—During April 13-15, 1979 visits were made to the Murchison River (27°31'S, 115°47'E) and the Wooramel River (25°47'S, 115°58'E) in Western Australia in order to examine the flora and fauna of these areas. A brief survey of mistletoes (Loranthaceae) and their hosts were made at the two localities.

1. Murchison River. (a) *Amyema preissii* (Miq.) Tiegh.—recorded on *Acacia rostellifera* and *A. victoriae*. Barlow, (*Aust. J. Bot.*, 14, 1966: 421-499) notes this species usually parasitic on *Acacia* (19 species known as hosts) but does not list them. The following Western Australian acacias have been recorded as hosts for *A. preissii* (based on collections at the W.A. Herbarium, PERTH): *A. acuminata*, *A. blakelyi*, *A. cyclops*, *A. oswaldii*, *A. saligna*, *A. stenophylla* and *A. trachycarpa*. (b) *Amyema* sp.—an undetermined *Amyema* was collected from *Encalyptus microtheca* (trees of which were commonly growing along the banks of the river). (c) *Lysiana casuarinae* (Miq.) Tiegh.—collected from *Santalum acuminatum*. Barlow (*loc. cit.*) records the following hosts—*Casuarina glauca*, *Acacia aneura*, *Exocarpos aphyllus*, *Hakea* sp., and *Melaleuca* sp. Data on a specimen in the W.A. Herbarium (PERTH) collected 9 ml. (14.4 km) E. of Wittenoom (22°15'S, 118°27'E) (ACB 11527) during 1965, records *S. acuminatum* as host of *L. casuarinae*, therefore this appears to represent a new host record.

2. Wooramel River. Mistletoes appeared to be uncommon in this area despite the abundance of several *Acacia* spp. which could act as suitable hosts. (a) *Amyema fitzgeraldii* (Blakely) Dans.—collected from *Acacia acuminata*. No other species of mistletoe were seen. Barlow (*loc. cit.*) records the common host as *A. aneura* and other "*Acacia* spp." Another Western Australian host record is *A. tetragonophylla* (Cape Range, e. 22°06'S, 114°00'E, George 6563).

It is interesting to note the diversity of mistletoes and their hosts within a small area at the Murchison River site. Published records of mistletoe hosts appear to be scant and it is probable that many new records will be made, especially in Western Australia. I would like to thank Messrs. P. G. Wilson, B. R. Maslin and M. E. Trudgen (W.A. Herbarium, PERTH) for assistance in plant identification.

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Sperm storage in *Moloch horridus*.—A female Mountain Devil, *Moloch horridus*, found just north of Carnarvon, was given into my care at the beginning of November 1978. The lizard was allowed the freedom of the whole of my fenced paddock, but preferred to stay in one restricted area. Here it could be seen every day, feeding on ants.

On November 7 it started excavating a burrow into which it laid eggs.

On January 11, 1979 it was seen digging again, about 10 metres from the first burrow. Through mischance this second burrow was destroyed by garden work on March 9. It then contained three eggs. One of these was dried; the second was severely damaged; the third appeared to have been attacked very recently by small white worms which had killed the well-developed embryo. This egg was preserved in alcohol. Reports of a double clutch in *Moloch* appear to be rare; it was recorded only once by C. C. Sporn in his detailed studies of the breeding of captive Mountain Devils (*W. Aust. Nat.*, 9 (7), 1965: 157).

The first burrow was opened up after three months and found to contain nine dried up eggs.

The lizard disappeared soon after its burrow was destroyed, but possibly may still be at large in my garden.

As there was no male *Moloch* in my garden it was evident that the female had been able to store sperm over a considerable period.

This phenomenon of sperm storage has been recorded in reptiles but, as far as I know, not hitherto in *Moloch*. I am indebted to Dr G. M. Storr, of the Western Australian Museum, for providing the following summary by Dr A. Bellairs (*The Life of Reptiles*, Weidenfeld & Nelson, London, 1969, vol. 2, p. 419): "It has been known for some years that in certain species of turtles, snakes and lizards the sperm can live in the genital tract of the female for long periods. It is therefore possible for a reptile to produce successive clutches of fertile eggs, usually diminishing progressively in number, after a single insemination. Sperm from an autumn mating can therefore be used for fertilising the eggs in the following spring. Sperm survival for several months is probably quite a common occurrence. There are instances, however, where living spermatozoa have been recovered from the oviducts, or fertile eggs have been laid by isolated female captives after much longer periods: 4 years in the case of a diamondback terrapin (*Malaclemys centrata*) and a box tortoise (*Terrapene carolina*), 4½ years in an indigo snake (*Drynarchon corais*) and 6 years in another colubrid, *Leptodeira*."

There may be a biological advantage in the capacity to store sperm in this species. Though conspicuous enough when met with in the bush, Mountain Devils are not very often encountered, and almost always as solitary, slow-moving individuals. Thus on a trip in the middle of November 1978, from Leonora to the Warburton Range and back, a total distance of some 1,450 km, driving slowly (in a landrover towing a caravan) during daylight and closely observing the road, I saw only four widely separated individuals. Possibly males and females may find each other only occasionally; therefore a capability for sperm storage may compensate for infrequent opportunities of mating.

—G. A. PHILIPP, City Beach.